UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,316	11/24/2003	Yuichi Inoue	FUJZ 20.753	4293

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 November 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   The disclosure is objected to because of the following informalities: Page 3 line
30 recites "the flame multiplexer". Frame is spelled incorrectly. "Flame' should be
changed to --- frame ---.

Appropriate correction is required.

Claim Objections

2.   Claims 1-11 are objected to because of the following informalities:

Claim 1 line 6 recites "load balancing receiving packets". "Receiving packets"
should be changed to --- received packets ---. There is a similar problem with claim 2
and 10.

Claim 4 lines 2-4 recite "a weight indicating a degree of communication load to
be accepted within the group to every relay device". "group to every relay device"
should be changed to --- group for every relay device ---.

Claims 3, 5-9, and 11 are objected to as being dependent on a objected base
claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

2.   Claims 2, 4-7, and 10 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claim 2 lines 4-5 recite "balances the receiving packets with the relay devices in

the enabling state of relaying packets or provides the redundancy". The use of

"enabling state of relaying packets" is awkward and confusing, and a single load

balancing receiver can not provide redundancy. There is a similar problem with claim 5

and 10.

Claim 4 lines 1-2 recite "the group table allocates a preference and a weight". A

table is used to store information. It is unclear what is doing the allocating since a table

can not allocate a preference and a weight.

Claim 4 lines 5-6 recite "determines receiving packets load balanced or for which

the redundancy is provided". It is unclear what is being determined and to whom and by

whom the redundancy is being provided. There is a similar problem with claim 5.

Claim 9 lines 5-6 recite "a receiving algorithm setting portion for setting the

receiving algorithm changed to the packet receiver". It is unclear how a receiving

algorithm can be set to a packet receiver.

Claim 10 lines 1-3 recite "the receiving algorithm is an algorithm for relaying the

receiving packets to a single arbitrary relay device so that the packets are load

balanced". The claim is confusing in that there are conflicting limitations. In order to

load balance within a system, the packets are sent to other relay devices based on the

load balancing criteria assigned to the other devices. Thus, load balancing can not be

performed by arbitrarily selecting the device to which the packets are relayed.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

>   1.   Determining the scope and contents of the prior art.
>   2.   Ascertaining the differences between the prior art and the claims at issue.
>   3.   Resolving the level of ordinary skill in the pertinent art.
>   4.   Considering objective evidence present in the application indicating
>   obviousness or nonobviousness.

5.   Claims **1-3, 5, 6, and 8-11** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kuo et al. (US 7,209,435) in view of Bare (US 6,493,318).

Regarding claim 1, Kuo teaches a monitoring portion for monitoring states of

other relay devices belonging to the same group (see col. 10 lines 7-12); and providing

redundancy based on the states of the other relay devices (see col. 9 lines 31-45). Kuo

teaches all the subject matter of the claimed invention with the exception of load

balancing.

However, Bare teaches a load balancing receiver for balancing received packets with the other relay devices (see col. 17 lines 63-65). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Bare in the system of Kuo. The motivation for doing so would be to make the transmission of packets through multiple relay devices more efficient.

Regarding claim 2, Kuo teaches the monitoring portion monitors whether or not the relay devices are enabled to relay packets (see col. 10 lines 7-12). Kuo teaches all the subject matter of the claimed invention with the exception of a load balancing receiver.

However, Bare teaches the load balancing receiver load balances the receiving of packets with the relay devices that are enabled to relay packets (see col. 17 lines 63-65). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Bare in the system of Kuo. The motivation for doing so would be to make the transmission of packets through multiple relay devices more efficient.

Regarding claim 3, Kuo teaches determining whether or not to receive packets based on the hello messages received from other devices (see col. 9 lines 39-45). Kuo teaches all the subject matter of the claimed invention with the exception of storing the states of other devices in a table.

However, Bare teaches storing states of other devices in a table using hello packets (see col. 26 lines 56-58). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Bare in the system of Kuo. The motivation for doing

so would be to make the transmission of packets through multiple relay devices more efficient by not transmitting to devices in a blocking state.

Regarding claim 5, Kuo teaches the monitoring portion transmits a control packet indicating a state of its own device to an adjoining relay device belonging to the same group (see col. 9 lines 46-48), and an adjoining device monitoring portion for monitoring the state of the other relay devices by receiving the control packet transmitted from the adjoining relay device (see col. 10 lines 39-45). Kuo teaches all the subject matter with the exception of periodically transmitting control packets.

However, Bare teaches periodically transmitting control packets (see col. 18 lines 9-11). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Bare in the system of Kuo. The motivation for doing so is to allow the system to monitor the states of other devices without having to request the state information, which allows the system to determine which links are active/alive (see Bare col. 18 line 13).

Regarding claim 6, Kuo teaches redundancy in a system using control packets (see col. 9 lines 31-45). Kuo teaches all the subject matter of the claimed invention with the exception of determining load balance based on control packets.

However, Bare teaches when receiving no control packets transmitted from the periodic transmitter of the adjoining relay device, the adjoining relay device monitoring portion determines that the adjoining relay device is in a disabling state of relaying packets (see col. 18 lines 8-15), and the load balancing receiver, based on the determination result, determines receiving packets load balanced with the relay devices

in an enabling state of relaying packets (see col. 20 lines 22-29) or for which the

redundancy is provided.

Regarding claim 8, Kuo teaches all the subject matter of the claimed invention

with the exception of load balancing. However, Bare teaches the load balancing

receiver is further provided with an accepted load setting portion for setting an accepted

load (see col. 11 lines 6-8). Thus, it would have been obvious to one of ordinary skill in

the art to use the system of Bare in the system of Kuo. The motivation for doing so

would be to make the transmission of packets through multiple relay devices more

efficient.

Regarding claim 9, Kuo teaches all the subject matter of the claimed invention

with the exception of the load balancing receiver. However, Bare teaches the load

balancing receiver is provided with a packet receiver for receiving packets, a receiving

algorithm setting change portion for changing a receiving algorithm of the packet

receiver based on the group table, and a receiving algorithm setting portion for setting

the receiving algorithm changed to the packet receiver (see col. 46 lines 1-8; The

method of load balancing is dependent on the state of the device which is stored in the

table).

Regarding claim 10, Kuo teaches redundancy in a system using control packets

(see col. 9 lines 31-45). Kuo teaches all the subject matter of the claimed invention with

the exception of determining load balancing.

However, Bare teaches the receiving algorithm is an algorithm for relaying the

receiving packets to a relay device so that the packets are load balanced with the relay

devices belonging to the group (see col. 79 lines 36-40). Thus, it would have been

obvious to one of ordinary skill in the art to use the system of Bare in the system of Kuo.

The motivation for doing so would be to make the transmission of packets through

multiple relay devices more efficient.

Regarding claim 11, Kuo teaches the relay devices belonging to the same

group are connected to a same transmission line (see Fig. 2). Kuo teaches all the

subject matter of the claimed invention with the exception of using the same address.

However, Bare teaches using the same MAC address for the load balancing

domain (see col. 46 lines 1-8).

6.   Claims **4 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kuo et al. (US 7,209,435) in view of Bare (US 6,493,318) as applied to claims 3 and 5

above, and further in view of Dani et al. (US 2004/0064583).

Regarding claim 4 and 7, Kuo teaches a switch preference (see col. 9 lines 61-

65) and redundancy (see col. 9 lines 31-45). Kuo teaches all the subject matter of the

claimed invention with the exception of a weight and a load balancing receiver.

However, Bare teaches a load balancing receiver determines how the received

packets are load balanced based on preference (see col. 12 lines 53-57). Thus, it

would have been obvious to use the system of Bare in the system of Kuo. The

motivation for doing so would be to make the transmission of packets through multiple

relay devices more efficient. Kuo in view of Bare teaches all the subject matter of the

claimed invention with the exception of weight.

However, Dani teaches a weight indicating the load acceptable for each device

(see paragraph 32 lines 1-11). Thus, it would have been obvious to one of ordinary skill

in the art to use the system of Dani in the system of Kuo in view of Bare. The

motivation for doing so would be to make the transmission of packets through multiple

relay devices more efficient.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Siev et al. (US 2004/0071087) and Frank et al. (US 2004/0053624) are all cited

to show systems which are considered pertinent to the claimed invention.
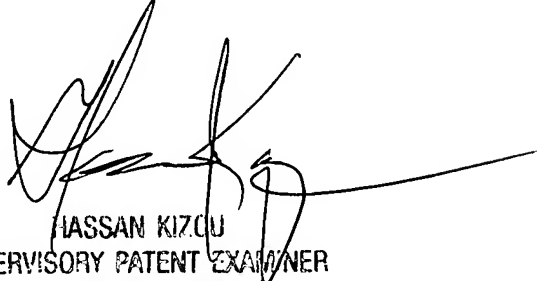

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Betty Lee whose telephone number is (571) 270-1412.

The examiner can normally be reached on Monday-Thursday 9-5 EST and alternate

Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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